

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A method of providing capture management in an implantable medical device, the method comprising:

monitoring for indicators of a likely increase in pacing threshold in the absence of a pacing threshold search of the type that comprises delivering pacing pulses; and

increasing a safety factor used in setting a pacing pulse output energy [[if]] responsive to a said [[an]] indicator of increased pacing threshold [[is]] detected in the absence of a said pacing threshold search.

2. (Original) The method of claim 1 further comprising:

setting a time interval during which the increased safety factor is maintained; and

restoring the safety factor to a programmed value after the time interval has expired.

3. (Previously presented) The method of claim 2, wherein the duration of the time interval is set according to the type of indicator of increased pacing threshold that has been detected.

4. (Original) The method of claim 2 further comprising:

monitoring for indicators of increased threshold during the time interval; and

resetting the time interval for which the increased safety factor is maintained if a second indicator of increased pacing threshold is detected.

5. (Previously presented) The method of claim 1 further comprising:
performing the pacing threshold search after detecting an indicator of increased pacing threshold; and
reducing the increased safety factor back to a programmed value if the pacing threshold search yields a result.
6. (Original) The method of claim 1, wherein indicators of increased threshold include a change in lead impedance.
7. (Currently amended) ~~The method of claim 1, wherein indicators of increased threshold include~~ A method of providing capture management in an implantable medical device, the method comprising:
monitoring for arrhythmia detections in the absence of a pacing threshold search of the type that comprises delivering pacing pulses; and
increasing a safety factor used in setting a pacing pulse output energy responsive to said arrhythmia detections in the absence of a said pacing threshold search.
8. (Original) The method of claim 7, wherein the arrhythmia detections include arrhythmia detections exceeding a predetermined duration.
9. (Currently amended) ~~The method of claim 1, wherein indicators of increased threshold include a~~ A method of providing capture management in an implantable medical device, the method comprising:
monitoring for pacing mode switch switches in the absence of a pacing threshold search of the type that comprises delivering pacing pulses; and
increasing a safety factor used in setting a pacing pulse output energy responsive to said pacing mode switches in the absence of a said pacing threshold search.

10. (Original) ~~The method of claim 1, wherein indicators of increased threshold include a refractory sensed event~~ events or an event events triggered by [[a]] refractory sensed event events in the absence of a pacing threshold search of the type that comprises delivering pacing pulses; and
increasing a safety factor used in setting a pacing pulse output energy responsive to said refractory sensed events or events triggered by refractory sensed events in the absence of a said pacing threshold search.

11. (Currently amended) An implantable medical device comprising:
a pulse generator for delivering pacing pulses;
at least one electrode in electrical communication with the pulse generator for delivering the pacing pulses to cardiac tissue; and
a microprocessor for controlling the pulse generator, receiving sensed data from the at least one electrode, wherein the sensed data includes an indicator of increased pacing threshold, wherein the sensed data is generated in the absence of a pacing threshold search of the type that comprises delivery of the pacing pulses, and increasing a safety factor used for setting the pacing pulse energy delivered by the pulse generator when the responsive to a said indicator of increased pacing threshold [[is]] detected in the absence of a said pacing threshold search.

12. (Currently amended) An implantable medical device (IMD) comprising:
means for monitoring for indicators of a likely increase in pacing threshold in the absence of a pacing threshold search of the type that comprises delivering pacing pulses; and

means for increasing a safety factor used in setting a pacing pulse output energy ~~[[if an]] responsive to a said~~ indicator of increased pacing threshold ~~[[is]] detected in the absence of a said pacing threshold search.~~

13. (Original) The IMD of claim 12 further comprising:

means for setting a time interval during which the increased safety factor is maintained; and

means for restoring the safety factor to a programmed value after the time interval has expired.

14. (Previously presented) The IMD of claim 13, wherein the duration of the time interval is set according to the type of indicator of increased pacing threshold that has been detected.

15. (Previously presented) The IMD of claim 12 further comprising:

means for performing the pacing threshold search after detecting an indicator of increased pacing threshold; and

means for reducing the increased safety factor back to a programmed value if the pacing threshold search yields a result.

16. (Original) The IMD of claim 13, wherein indicators of increased threshold include a change in lead impedance.

17. (Currently amended) ~~The IMD of claim 13, wherein indicators of increased threshold include~~ An implantable medical device (IMD) comprising:
means for monitoring for arrhythmia detections in the absence of a pacing threshold search of the type that comprises delivering pacing pulses;
means for increasing a safety factor used in setting a pacing pulse output energy responsive to said arrhythmia detections in the absence of a said pacing threshold search;
means for setting a time interval during which the increased safety factor is maintained; and
means for restoring the safety factor to a programmed value after the time interval has expired.

18. (Original) The IMD of claim 17, wherein the arrhythmia detections include arrhythmia detections exceeding a predetermined duration.

19. (Original) ~~The IMD of claim 13, wherein indicators of increased threshold include a~~ An implantable medical device (IMD) comprising:
means for monitoring for pacing mode switch switches in the absence of a pacing threshold search of the type that comprises delivering pacing pulses;
means for increasing a safety factor used in setting a pacing pulse output energy responsive to said pacing mode switches in the absence of a said pacing threshold search;
means for setting a time interval during which the increased safety factor is maintained; and
means for restoring the safety factor to a programmed value after the time interval has expired.

20. (Currently amended) ~~The IMD of claim 13, wherein indicators of increased threshold include a~~ An implantable medical device (IMD) comprising:
means for monitoring for refractory sensed event or an event events or events
triggered by a refractory sensed event events in the absence of a pacing
threshold search of the type that comprises delivering pacing pulses;
means for increasing a safety factor used in setting a pacing pulse output
energy responsive to said refractory sensed events or events triggered by a
refractory sensed events in the absence of a said pacing threshold search;
means for setting a time interval during which the increased safety factor
is maintained; and
means for restoring the safety factor to a programmed value after the time
interval has expired.

21. (Previously presented) The implantable medical device of claim 11, wherein the at least one electrode is coupled to a lead, and the indicator comprises at least one of an arrhythmia detection, an arrhythmia episode duration, a pacing mode switch of the pulse generator, a refractory sensed event or an impedance change of the lead.

22. (Currently amended) An implantable medical device comprising:
a pulse generator that delivers pacing pulses;
at least one electrode in electrical communication with the pulse generator, wherein the at least one electrode is configured to deliver the pacing pulses to cardiac tissue; and
a microprocessor that controls the pulse generator, receives sensed data from the at least one electrode, wherein the sensed data includes an indicator of increased pacing threshold, and wherein the indicator is associated with a compromised ability of the microprocessor to perform a pacing threshold search of the type that comprises delivery of the pacing pulses, and increase a safety

factor used for setting the pacing pulse energy delivered by the pulse generator when the indicator of increased pacing threshold is detected.

23. (Previously presented) The method of claim 1, wherein increasing the safety factor comprises increasing the safety factor to a predetermined setting.

24. (Previously presented) The method of claim 1, wherein increasing the safety factor comprises increasing the safety factor to a predetermined maximum safety factor value.